foresight

ISSN 1463-6689

The following article was published in **foresight** Vol 1, No 1, February 1999

© 1999 Camford Publishing Ltd

For more information:

http://www.camfordpublishing.com

conditions of use

Single copies of this article may be printed for personal use as allowed by national copyright laws.
Permission of the publisher/copyright holder is required for all other uses.

foresight/ vol.01,no.01, feb.99
the journal of futures studies, strategic thinking and policy

© 1999 Camford Publishing Ltd

.073

1463-6689/99/010073-18

why the future is Fortean

ian miles*

The future is often portrayed as rational, logical, and informed by the continuing achievements of the scientific and technological revolution. In similar ways, our own time was seen as marked by such advances by futurists of earlier decades. But at the end of the twentieth century, resistance to the claims of mainstream science and technology has grown to an extent unanticipated in these earlier appraisals. This essay argues that such resistance is liable to flourish in the twenty-first century, and that understanding why this should be the case is important for studies of the future. In particular, this essay takes up the Fortean approach. This approach examines areas of human experience that are 'damned' by mainstream science, and also examines the processes and strategies adopted both by those effecting the damnation, and those challenging it. The case being made is that although we can expect many of these damned phenomena to remain excluded – deservedly so in some cases – this will not always be the case.

*

***Ian Miles** is research director at PREST (Programme of Research on Engineering, Science and Technology), and codirector of CRIC (Centre for Research on Innovation and Competition),*
University of Manchester, Oxford Road, Manchester M13 9PL, UK
(+44 161 275 5922;
fax: +44 161 273 1123;
email: ian.miles@man.ac.uk).

Unlike most of his work over the part decade, this study was prepared completely in his own time, without the aid of any research funding, and does not draw extensively on the work of colleagues.

It is a rich irony that the 'millennium bug' threatens to wreak havoc in computer systems, at the same time as apocalyptic millennarianism helps underpin a flourishing of cults. And no cult with any pretensions lacks its own internet presence!

These are just two examples of the ways in which the approach of the millennium has revealed stress points in our societies. Not surprisingly, these stresses are mirrored in the relations between the public and science. Indeed, some of these stresses might not just be reflected in these relations – they may originate in them. This essay seeks to cast a little light on these issues from a direction that has not been much explored by futures researchers. The reader should be warned – here be dragons. However, this essay is not intended as another salvo in the 'science wars' between some practising scientists and some social and cultural analysts of modern science and technology. Along with the latter, I see science as a social construct, and likewise technology. But I share with the former the view that science and technology are critically different from art, religion, and other social practices. However, they do overlap, influence and inform each other, and their boundaries are both permeable and changing. This essay does have a bearing on these themes, but is concerned with a rather different agenda.[1]

Provocations

Let me begin with a set of forecasts for the early 21st century; later I will consider the logic behind them.

- Current widespread views that UFOs are extraterrestrial craft will decline in prevalence. Explanations of the phenomena as having both natural (eg geophysical) and psychosocial bases will grow in prominence. Yet UFO experiences will persist, accompanied by a growing valuation of such UFO experiences in terms of spiritual or shamanistic journeys. This will mean a change in the substance of the experiences, with different types of close encounter being reported.
- Aspects of a wide range of paranormal experiences, including and going beyond the practices of charismatic groups (glossalalia, 'holy laughing', etc) will be incorporated into the standard practice of significant sections of the religious mainstream of 'post-superstitious' Western societies.
- Mysterious accidents and coincidences will be common features of complex technological systems. They will generate their own folklore and phobias.
- New classes of paranormal phenomena will emerge, connected with new technologies. Examples are computer networks (the notion that the internet is haunted will be one of these – already we have had cases of 'haunted computers'), with intelligent agents (perhaps there will be tales of telepathic computers, perhaps of agents coming to have malign properties), biotechnology (reincarnation through implants and clones?) and even nanotechnology.
- More essays like this will be written. Some of these will come from scholars who are currently antagonistic to the arguments set out below - and indeed who are in many cases opposed to the very business of reading and writing such accounts. Nevertheless, there will continue to be many commentators arguing that essays like this are opening the floodgates of unreason.

These forecasts are not based upon excessive viewing of the *X Files* or its analogues. Nor are they simply another outpouring of premillennial tension, (though they may have infused something of that other PMT – postmodern times). They derive from engagement with and reflection upon the content and context of Fortean studies. For those unfamiliar with this domain, a brief synopsis is in order.

The Fortean field – new maps of hell?

Charles Hoy Fort was one of the twentieth century's great, and most influential, mavericks. In a series of books, written in a unique style that blends poetry, detection, humour, anger and wild speculation, he set out to vindicate what he called 'the damned', to explore the parts of maps where signs read 'here be monsters'.[2] His damned are data rather than spirits. They are not the lost souls of a Dantean Inferno. They are accounts which have been cast out, or excluded from entry into, the canon of observations accepted by mainstream sciences. They are non-conformist, even heretical accounts. Sometimes they are accompanied by more tangible items of evidence – photographs, casts of paw prints and other debatable traces. They are discounted because they fall outside accepted

1 See the website http://www.members.tripod.com/~ScienceWars/index.html. The so-called 'Sokal hoax' stoked the flames of this war when Alan Sokal published an article in the journal *Social Text* purporting to represent an unjustly excluded approach to physics – he later revealed that this was a spoof, designed to show up the cultural critics of science as ill-informed. The relevance to the discussion of damnation in the present essay is apparent – but note that the present discussion deals more with damned observations than with theories and worldviews. For more on Sokal's views, see Alan Sokal and Jean Bricmont, *Intellectual Imposture*, Profile Books, London, 1998.

2 The *Book of the Damned* (1919), New Lands (1923), *Lo!* (1931), and *Wild Talents* (1932). (My own copies are Ace Books dating from the 1970s, but recent reprints/new editions have been provided by *Fortean Times*: John Brown Publishing, London.)

theories and modes of explanation. Fortean studies provide a sanctuary for the damned.

Of course there are familiar tales about how the establishment ignored the claims of early empirical science (refusing to look through Galileo's telescope, for example), and how scientists themselves can share in this selective blindness (a famous case being the discounting of reports of meteorites as peasants' tales). While some accounts are damned, furthermore, there are numerous cases of scientific fraud noted, where spurious results have been uncritically accepted by scientific journals, partly because they did not deviate far from received wisdom – and in some cases, partly because they originated from prestigious sources.

Having myself come upon Fort's writing as a teenager, I was struck as an undergraduate by the ways in which it anticipated the sociology of science that I was then exposed to. This sociology of science, developed in the wake of Thomas Kuhn's influential detailing of scientific paradigms, had upset the notion of scientific progress as an incremental edging towards better and better approximations of truth. The term has been subject to much definitional debate, and spawned fruitful new applications (such as the notion of techno-economic paradigms), but for present purposes, we can see scientific paradigms as worldviews. They are views of how the world operates, and of what sort of science is required to understand it, understandings typically shared among a scientific community – who may debate the validity of one or other theory, but who agree upon many underlying principles. Paradigms draw attention to specific sorts of data and tests of theories, while discounting others: it is hard to make the case for a radically new approach within the terms and conditions of the existing approach. The debate around Kuhn's ideas has suggested several mechanisms responsible for paradigm change, for example:

- exhaustion of a paradigm – it becomes less able to provide concise and convincing analyses, and there is dissatisfaction with the increasingly baroque elaborations based on its fundamental assumptions;
- accumulation of anomalous evidence that proves hard to discount, perhaps introduced through the use of novel instruments;
- changed socioeconomic circumstances that lead to different views of the world becoming more readily acceptable (thus its is suggested that the decline in a geocentric view of the universe is related to the new politics and theology of Renaissance Europe);
- conflict between 'young Turks' and an older generation of scientists, and/or conflict between different disciplines and factions (which often resorts to decidedly unscientific methods of settling debates).

Fort amassed a huge collection of accounts of anomalies – largely drawn from scientific journals and similar sources (rather than from tabloid press cuttings, as has been alleged by some of his lazier critics). Many of the things he addressed are still damned. Other phenomena which he discussed are now deemed acceptable by mainstream science. Forteans are not necessarily always convinced by the explanations that are offered by the mainstream, which are sometimes seen as 'explaining away' some aspects of mysteries while ignoring other features. But in some instances the explanations advanced do seem to provide quite plausible accounts, applying to a good proportion of cases. Judgements as to plausibility are diverse, but my own selection of such pardoning and redemption of the damned includes:

- Blocks of ice which fall from the sky, and not as a result of aircraft discharging surplus liquids. Ice meteorites are now acceptable.
- The visions of cities in the sky, which form a major theme of Fort's *New Lands*, are no longer seen as merely the ramblings of inebriated sailors. Complex structures, apparently floating in the air, have been photographed. Atmospheric conditions have been shown to magnify images of ice crystals to vast extents, creating the effect of vast floating architectures.
- Strange lights may be emitted by the earth in the course of earthquakes and similar events. The nature of geoluminescence is debated, as is its scope (and relation to aerial phenomena like fireballs and UFOs). But the phenomenon has gained acceptance again, both through photographic evidence and via first-hand accounts from respected geologists.
- Human bodies can burn in strange ways, giving rise to anomalous fire fatalities that have been long ignored by the mainstream. The existence of an anomaly has long been accepted only by heretics (and sometimes by shaken observers), who have typically labelled these as cases of spontaneous human combustion. Recent studies demonstrate that there are circumstances where a human body can burn over long periods, creating high temperatures but leaving surroundings largely untouched, through a wick effect – in which clothing or bedding acts as an external wick for a candle constituted by human body fat.[3]

But many other Fortean phenomena remain damned, even though they may be objects of belief by quite sizeable proportions of the population. And at this point, it is important to note that Fort did **not** say that these phenomena necessarily exist at all – just that there is

3 My information comes from the BBC TV programme 'Spontaneous Human Combustion' in the *QED* series, broadcast on BBC1 on 26 August 1998.

something to be accounted for. Certainly Fort was not saying that they take the form which observers have used to describe them, let alone endorsing popular explanations (eg spectral forms are ghosts of the departed, UFOs are alien spacecraft). Fort enjoyed toying with bizarre explanations for his phenomena, but avoided erecting a set of theories. His main mission was to emphasize that there is something to be explained, and equally importantly, that the social structures of science lead to the suppression of evidence which might necessitate re-evaluation of core doctrines or favoured theories.

Thus the sorts of phenomena to which Fort and his successors draw attention include:

Aerial anomalies. Fort detailed a series of mysterious 'airship sightings' of the nineteenth century (to which can be added earlier accounts of dragons and angels, the foo fighters of World War Two, and late twentieth century UFOs). Other debatable meteorological phenomena which fall under the Fortean rubric include ball and other peculiar reports of lightning, and strange objects falling from the sky (jelly-like organic substances, hails of mud or stones, fish or frogs, etc).

'*Wild talents*'. Fort went beyond the usual concerns of early parapsychology and psychical research (telepathy, precognition and other forms of ESP) to consider cases of apparent teleportation, pyrosis (fire-raising), and things that may or may not reflect specifically human talents (eg spontaneous human combustion), etc. Bizarre mutilations and disappearances of animals are perhaps analogous phenomena (though some UFO true believers relate them to the alleged abductions of humans). Unusual cognitive phenomena are also included; not just the bizarre neurological cases so well described by Oliver Sachs in his series of reports from the frontiers of neurophysiology, but also such reports as *Out of the Body Experiences* and *Near Death Experiences*.

Fringe zoology. This includes cryptozoology, the study of evidence for, and search for animals that are not officially accepted as existing. These include possible sightings of prehistoric or other extinct creatures (such as the Tasmanian thylacine). But they also include creatures that are even more mysterious: the lake and sea monsters, and the beast-men like yeti, yowi, and bigfoot. Such creatures, common in myth or folklore, also have contemporary witness accounts. (These have a disconcerting tendency to blur into reports of clearly supernatural creatures like mermaids and fairies!) Another cluster of zoological phenomena concerns misplaced creatures. The current exemplars are the ABCs – alien big cats – persistent reports of lions, pumas, etc in many areas of the British Isles.

Other fringe disciplines, and studies of anomalies within mainstream fields of study. Prominent examples in the domains of palaeontology and history include apparent contradictions with established views of the evolutionary process or the age of the Egyptian pyramids, claims for the existence of undiscovered early civilizations and of major natural catastrophes (large-scale meteor impacts and floods, for example) in human history.

Suspicious synchronicities. Geoluminescence was mentioned above, as a phenomenon whose damnation may be revoked. But Fort noted more outlandish correlations between earthquakes, meteor falls and even lights on the moon (reports of such lights are numerous, but have been treated with suspicion by astronomers). Many of the alternatives to mainstream Western medicine seem to rest on such symmetries. Thus the ancient view that the shape of the leaves or other features of plants would be a guide to their healing powers does seem to have given herbalists access to a lot of effective treatments. (If we discount the notion that the evolutionary process has been conditioned by an effort to communicate with humans – rather an anthropocentric view! – then what explanations remain? Coincidence? Post-hoc rationalization? Selective use of evidence?) Homeopathy is even harder to accommodate within orthodox medical theories. This is because the doses of substances it involves are vastly lower than those which would be expected to have a physical effect – indeed, homeopathic potencies can be so dilute that no molecules of the critical substance should remain in the remedy. As well as being founded on the notion of like curing like, it goes to extreme lengths (as compared to mainstream medicine) in correlating the properties of various substances with the personality types and disease patterns of patients prescribed the remedies associated with these substances. Astrology is another popular belief system. Though it lacks a convincing explanatory base, and is regularly surrounded by mumbo-jumbo and charlatanism (not to mention newspaper horoscopes), it does point to correlations between personality types and the time of year in which one was born.[4] Suspicious correlations are, of course, excellent kindling for *conspiracy theories*. Who was where when JFK was shot, who happened to be the brother of a witness, and so on: these are the stuff of which elaborate conspiracy theories can be woven. (And if people will not accept your own worldview, then perhaps it is not just collective closed-

4 These correlations have been demonstrated by several large-scale psychological studies; but one of the most impressive sets of evidence was produced as a by-product of detailed market research undertaken by the British Royal Mail. When they related levels of correspondence to birth dates, they found huge swings over the calendar. Of course, it could be that time of birth is related more to mundane influences than to planetary ones. The likelihood of catching various diseases, the ease of playing outdoors, and various other experiences that might prove critical for personality development are highly seasonal, for example.

mindedness. No, a conspiracy must be at work, aiming at making the gullible public swallow the lies.) Here the secret forces are more likely to be secret agents than occult forces, or unexplained natural phenomena. The wilder shores of conspiracy theory are heavily populated, in part because, as is well known, conspiracy theories are able to explain just about anything – though undoubtedly mundane conspiracies do exist. (As are efforts to eliminate the damned by explaining them all as hoaxes and delusions – though undoubtedly there are hoaxers, deluded people, and sometimes even deluded hoaxers.) The rule that conspiracy theory is bad theory applies to Forteana as much as to any other field.

Mysterious visitors. These take various forms around the world, but there are visitors specific to industrial societies. In the UK, it has been common for many years now to encounter newspaper reports of BSWs – bogus social workers. These are typically reproduced as normal news stories, unrelated to any wider phenomenon, though there may well be links to other reports in the same area in recent times. The typical account is that of a caller, or pair of callers, who may be of either sex, who visits a parent of young children to investigate claims of ill-treatment (though other rationales are also provided). Sometimes there is an intimate examination of the child; sometimes threats are made that the child will be taken into care. The parent's suspicions are raised at some point, whereupon the visitor(s) make a swift departure, usually by a car that proves untraceable. The journalistic version may explain the phenomenon in terms of suspicions of individual or organized child abuse or theft of babies, but the shape and scale of the phenomenon is more reminiscent of the MIB (Men in Black) of ufology. (These visitors are supposed to interrogate and sometimes threaten people reporting UFO sightings.) Perhaps because of the ready accessibility of naturalistic explanations (escaped pets instead of child abusers) the journalistic treatment is also similar to that afforded ABCs (as compared to, say, lake monsters or UFOs).

Mysterious attacks. Animal mutilations are another puzzling phenomenon, occurring with such frequency and over such wide areas, and so rarely being tied to human perpetrators, that it is difficult to understand their significance. In many industrial countries the attacks focus on horses, sheep and cattle, and do not appear to be a result of animal predators (ABCs are tied to quite different attacks on domestic animals). There are often what appear to be sexual and/or ritual elements. An interesting variant in Central America (spreading to some other Hispanic zones) is the *chupacabras*, or goatsucker, the name given to the supposedly vampiric assailant of goats and other domestic and farm animals. Several lurid sightings of the creature responsible have been claimed, suggesting that this phenomenon is popularly explained in terms of the next category (the supernatural). In contrast, it is common for animal mutilations in industrial countries to be related to satanic conspiracies or even to UFOs (aliens pursuing their inexplicable interests).

The (supposedly) supernatural. Some of the phenomena already discussed are viewed by some people (and were often traditionally interpreted) as supernatural rather than just paranormal – involving spiritual or occult forces and entities (rather than merely undiscovered physical processes, mental energies, or advanced aliens.) There are many additional varieties of apparently supernatural phenomena, some of which are 'naturalized' in terms of explanations such as those above, but which remain popularly accounted for in supernatural terms: *apparitions* – popularly believed to be of ghosts, angels, holy figures; *poltergeist* activity – involving spontaneous movement of furniture and household items, strange knockings, and again hails of stones (repeatedly on a particular dwelling, or associated with other strange phenomena), and so on; *messages* from mysterious sources and/or 'higher powers' constitute another variety (sometimes associated with apparitions or poltergeists, but coming in many other forms). The recent exemplars have been 'holy' images and symbols in sliced vegetables, doughnuts, etc, and crop circles. Crop circles (the study of which has been labelled cerealogy) have been shown to be (at least often) of human origin, rather than the work of UFOs or Gaia. Still, a line of thought persists, that even if human perpetrators are at work, they might often be channelling messages from higher sources. (A view encouraged by some circle-makers, dismissed by others.) Such rationalizations are not new. In earlier times, mediums could be exposed as practising fraud, and now TV psychics and spoonbenders can be caught out – but it's only natural for such poor souls to resort to artifice when they're under pressure night after night to deploy a sporadic and poorly understood talent. Why (we might be tempted to argue), even prodigiously gifted athletes sometimes take performance enhancing drugs.

As this last line of discussion demonstrates, hoax and deception, self-delusion and preconceptions, are liable to be apparent among true believers and new converts. Forteans are aware of this, though they are also aware that we cannot always be sure when or how far these practices are operative. They would also point out that the capacity for self-deception and selective perception is also widespread in the mainstream, and thus be a little cautious about exorcisms of the damned.

.078

Damnation and discomfort – here be dragons

Still, these form an uncomfortable set of phenomena. It may not be too difficult to accept that there might be something in one or two of them, but the range of damned phenomena listed above must stretch the tolerance of many broad-minded people. There are strong cognitive pressures to keep the damned damned. Not least for futurists – futures studies have had enough difficulty in getting accepted as a respectable field of endeavour, and don't need to be contaminated by this sort of crackpottery. Evidently, anyone interested enough in these things to write about them is inherently running very close to the wind.

If there is more than fraud, delusion and error underlying these phenomena, our ways of thinking about the world would seem to be under assault from many directions. So many, indeed, that we need to ask how it is that modern science has actually been able to attain enough of a grasp on reality to underpin the considerable successes of modern technology – ranging from tissue transplants to jet aircraft, laptop computers to space probes – if its practitioners are so wrong, so often. What sort of universe can encompass these weird phenomena, and yet still be so regularly amenable to scientific explanation and technological manipulation? And why is it that investigation of these phenomena has so rarely yielded solid evidence (beyond witness accounts)? Admittedly, we have been able above to list a number of 'pardoned' phenomena that are now accepted; but consider the case of parapsychology. Despite decades of systematic research, and public belief in phenomena like telepathy, scientific opinion remains highly divided as to the claims for statistical evidence for ESP; and the talents in question remain elusive, far less reliable than, say, radio and X-rays, and unnameable to explanation.

But we do not, of course, have to assume that there is a material basis to all of these phenomena. Some may be more substantial than others; some may indeed turn out to be nothing more than the illusions and delusions sceptics suspect them to be. Others may have material bases. But we do not have to assume that, where phenomena might have material bases, their natural (or even paranormal) underpinnings are remotely like those assumed by observers. Just as 'cities in the sky' transpired to be a particular sort of mirage, and spontaneous human combustion may be an unusual type of wick effect in operation, so other damned phenomena may well turn out to have underpinnings which are quite orthodox, if rather surprising. Other damned phenomena, like meteorites and, possibly, fireballs, may require explanations that challenge orthodox scientific assumptions but can fairly readily be brought back into the fold. Others may be more problematic: a scientific revolution in palaeontology led to dinosaur bones being recognized as more than mere freaks or giant versions of contemporary reptiles, and perhaps some specimens of Forteana will come to be interpreted in new ways. But this need not necessarily mean that UFOs are nuts and bolts spacecraft, lake monsters are prehistoric survivors, or poltergeists wild spirits.

The phenomena may be uncomfortable, but they are discomforts that the human race has lived with for a long time. The editors of the leading magazine in the field, *Fortean Times*[5] have commented that there only seems to have been one completely new phenomenon emerging since Fort's own day.[6] This involves the mysterious voices that allegedly become imprinted on blank audiotapes, and that reportedly appear to respond to human enquiries in a semi-conversational way (rather like the spirit voices of traditional mediumship).

Of course, what is 'new' is a matter of definition. A well-established phenomenon may occur in a new guise, just as in innovation studies an established technology may be taken up in a new industrial sector. Like so much else, novelty is a relative affair. Take for example 'haunted' computers, displaying text which no-one claims to have input, or behaving in errant, but apparently intentional ways. These might be further candidates for new phenomena; or they could just be seen as an extension (or fusion) of conventional hauntings and tales of errant and apparently possessed technology. (Or simply a new tool has been applied in the service of hoaxes and self-delusion, from other perspectives). New technology may continue to provide a focus for new variants of old phenomena, or perhaps for completely new phenomena. For example, there are already stories circulating about people who have received organ transplants acquiring behavioural characteristics of the donors of these organs. We can imagine that as transplant techniques develop, with transgenic and neurological transplants, such interesting variants of these stories will appear. The haunted computer is likely to be joined by the haunted internet – after all, not only are there vandals and hoaxers enough out there already (planting viruses and phoney messages), but

5 See http:// www.forteantimes.com that has a valuable set of links to sites of related interest. For more scholarly studies, see the associated journal *Fortean Studies*. Other useful links are provided at www.research.umbc.edu/~frizzell/info.

6 The persistence of phenomena is such that a whole dictionary of acronyms could be prepared in this field. In addition to the familiar ESP and UFOs, there are ABCs (alien big cats), BSW (bogus social worker), BVM (blessed Virgin Mary apparitions), the ETH (extraterrestrial hypothesis for explaining UFOs), EVP (electronic voice phenomena), MIBs (men in black), OBEs (out of the body experiences), UBOs (unknown bright objects) and many more.

researchers are busy developing intelligent agents and computer-hopping software of other sorts. It is hard to believe that some of us will not find mysterious messages from beyond appearing in our mailboxes in the future: perhaps we will see new sorts of medium who are able to conjure up and channel such phenomena.

A distinction is sometimes drawn between the Fortean enterprise – which involves examination of such anomalies – and the Ripleyan (from Ripley's *Believe It or Not*) delight in marvels. Ripleyan marvels – epitomized in magazines like *Bizarre*, and much of the tabloid press – are basically extreme or bizarre, they need not be damned, let alone authentic.[7] The two approaches may well overlap in both substance and motivation, but the Fortean enterprise involves a critical attitude with which to temper the frisson of the weird and the 'what if'. This is a sceptical attitude with a difference. What we might call the *true sceptics* represented in *The Skeptical Enquirer* and CSICOP (the Committee for the Scientific Investigation of Claims of the Paranormal)[8] are seen as being one-sided defenders of scientific orthodoxy. Their scepticism is largely reserved for the damned: the process of damnation itself is treated uncritically.

The Fortean attitude is sceptical both of the first-hand accounts of witnesses (and of the photographs and other evidence that may be mustered) but also of the dismissive explanations from mainstream science. For example, the convenient (but not actually reported) whirlwind that must have swept the fish/frogs/whatever into the air, before depositing them some miles away from water is itself subject to scrutiny. How did it select just this variety of fish, and in such numbers? (Perhaps a centrifugal effect?) How did it come to deposit its hoard so precisely in a delimited area, often with no-one present reporting unusual weather? And so on. The orthodox explanation is often only rivalled for implausibility rather than the invocation of malicious or playful agencies – 'it was the UFOs that done it', a trickster spirit decided to tease us, etc.

Beyond the true future

The damned material may well be of interest to various standpoints: media studies, urban folklore, cultural anthropology, abnormal psychology and theology, not to mention parapsychology and other fringe sciences. But what does it have to do with the future? Does it mean anything to talk about a Fortean future?

There are several answers. For 'true believers' and their close cousins, the true sceptics, the answers are fairly straightforward. In both cases, *one explanation covers the phenomena*.

In practice, most true believers and sceptics' convictions cover limited sets of phenomena. At the extremes we can find people who explain everything unusual in terms of the operation of spirits or *djinns* on the one hand, or of fraud and self-deception on the other. But most true believers are only committed to the validity of specific explanations of a subset of these phenomena, and pay little heed to the rest of the damned. Thus large swathes of the Fortean field are explained by, and reinforce belief in, miracle visitors[9] (aliens or angels, ghosts or golems), parapsychological capacities (collective unconscious or clairvoyance, transmigration or telepathy), occult forces, and so on. Despite the best efforts of new age obfuscation, many of these accounts are mutually exclusive, or at least demand heavy reworking to be accommodated to each other. In practice most true sceptics concede that *some* Fortean phenomena might have more than fraud and fallacy behind them, though at present the sceptical reaction to premillennial tension seems to be leading to efforts to explain away everything that is not blessed by mainstream science.

For those who know the truth, the answers are clear enough, then. For true believers, the evidence will sooner or later break through, as long as we are prepared to resist government conspiracies and closed-minded scientists. The truth will no longer be out there, but force its way inside the mainstream. One particular variant of this will have been encountered by most futurists. This is the argument that futures research itself is going to be transformed by acceptance of precognition. Professional futurists will either have to nurture their own parapsychological capacities or risk redundancy. To date this particular prediction does not seem to be a good exemplar of the abilities of psychics, nor of those who study them… For true believers, the future will not be Fortean, but, rather, one transformed by their own worldview. True sceptics likewise do not believe in a Fortean future: their desirable future would be one in which their (narrowly rational) worldview is the norm. But though they will fight for this, they are often in practice sceptical of the ability of the mass public to extricate itself from irrationalism. The future may remain prey to Fortean phenomena – or to be more accurate, from their perspective, by reports of such phenomena.

One does not have to buy into these belief systems to see that, whatever things actually are going on in the Fortean field, they have implications for our future:

7 One UK tabloid has made a speciality of inventive lead stories under such headlines as 'World War 2 bomber found on moon' (a later story concerned the mysterious disappearance of the plane!) and 'Loch Ness monster is a German U-boat'.

8 See the website at http://www.csicop.org

- Even if there is little more to the damned phenomena than the true sceptics suggest, they are still testifying to us about important and neglected processes – ranging from the prevalence of, and modes of entry into, altered states of consciousness, to the nature of postmodern culture and the challenges that it raises to established systems of authority and expertise.
- If only a fraction of the phenomena do have more of a basis than the true sceptics suggest, then this suggests that the mechanisms by which science damns or blesses data are more problematic than generally believed by scientists themselves. One implication is that there may be other classes of data – not necessarily recognizably Fortean – that are being excluded for the wrong reasons, and that scientific processes may need to be re-examined to allow for more meaningful engagement with such material. Another implication is that recognition of scientific fallibility may contribute more to the undermining of the credibility of scientific expertise in general – though a gracious recognition of the failures of established scientific practice could go some way to averting this.
- Depending upon which phenomena are undamned, and what sorts of explanation have to be introduced to account for them, there may be greater or lesser challenges to the models and paradigms used in mainstream science. The damned may raise hell if they are allowed to make their voices heard. Cryptozoology might provide some of the best-behaved vindicated data. We are actually in a period of rapid discovery of new species, and rethinking of the boundaries within which species live (unfortunately, while we are also busy reducing biodiversity and contributing to mass extinctions). In any case there is little reason to expect, just because there are some prehistoric survivals (eg the coelacanth) and some ABCs turn out to be really large felines (more than exaggerated pussy cats), that yetis and yowies, Nessie and neriads, will come in from the cold. Alien visitors might be accommodated (though why are they so humanoid?): but the faster-than-light travel and other problematic capabilities of UFOs and their supposed inhabitants (eg wafting abductees out of closed rooms)? Transfer of information between people by as-yet unknown physical means might not be too mind-blowing (except for psychologists who argue that the immense variability of cognitive structures makes it unlikely that thoughts and experiences can be exchanged like telephone or TV signals). But the apparent freedom of telepathy from physical constraints (like lead shielding, and the inverse square law which means that the effects of electromagnetism, gravitation, sound waves, etc diminish sharply as distance from the source increases) does stress established paradigms. This is not to mention the problems posed by remote viewing, precognition and related phenomena. If significant areas of mainstream science do have to adapt substantially to damned data – essentially to undergo paradigm changes – then one thing is sure. Forecasts based on the assumption of stable paradigms within which knowledge accumulates become invalid. The likely result is not so much failure of anticipated scientific and technological capabilities to materialize (though this might happen sometimes). Most likely are developments of knowledge and technique that are not anticipated on the basis of the mainstream worldview.

These bullet points suggest a spectrum of Fortean possibilities, ranging from minimal anomaly (where the challenge is to understand social processes - frauds, mass media and mass psychology, changing relations between science and culture), through recognition of the greater prevalence of anomalous mental states and unfamiliar phenomena, to minor challenges to scientific understanding, through to major disruption of established sciences. One interesting aspect of this spectrum is that the processes at work in the possibilities higher up in the list do not disappear the further down the list we go. Indeed, as already noted, it is easy, even essential, to believe that many cases of UFOs and parapsychological phenomena are fraudulent, while still retaining a belief in there being a solid basis to some of the phenomena. And it would be hard to discount the role of the media in shaping and amplifying selective instances of the damned.

Fort and foresight – why a seeker is born every minute[10]

A vision of the Fortean future (more accurately visions of alternative Fortean futures) has already been used in this essay. It was used to generate the provocations with which we began. The underlying dynamics of damnation (and sanctuary

9 The term is borrowed from Ian Watson's daring novel *Miracle Visitors*, Granada/Panther, London, 1980. This attempts an explanation of UFO and related experiences that lies far outside the usual conventions of his science fictional genre, and its cast of characters presents archetypal figures in Fortean debates (with the exception of scheming hoaxers).

10 Thanks to the Firesign Theatre, from whose delightfully Fortean *Everything You Know is Wrong* (1974) LP Columbia KC33141 the phrase 'there's a seeker born every minute' is borrowed. Apparently this is not available on CD, though the almost equally relevant *How Can You Be In Two Places At Once When You're Not Anywhere At All* (1969) LP Columbia PC9884, now is as CD Mobile Fidelity MFCD 834. Thanks to http://www.doctechnical.com/fst/ for the details.

and redemption) are closely related to the evolution of the contemporary world – in particular the emergence of postmodernism.[11]

This can be associated with a number of significant developments, which are liable to shape the experience and treatment of Fortean phenomena. A selective list of these includes the following features of the contemporary world:

- Industrial society has secured unprecedented affluence and leisure time for large portions of its populations. Its labour force has become increasingly dominated by symbol processing and office work, with a large emphasis on social interaction. Even though there have been trends for jobs to be more skilled and have greater spans of responsibility, these are developments within an ever-increasing division of labour; in consequence, one's contribution to the collective social product becomes harder to identify.
- Work and leisure have become intensively based on modern scientific and (more so) technological knowledge. Our interlinkages with the wider world are mediated by an ever more complicated technical apparatus, of media and instrumentalities. The origins of many of these technologies are obscure – few users have any hope of understanding what is really going on within them, of what technical principles inform them, of what human labour and ingenuity has produced them. They are also, of course, often in a process of near-permanent change themselves, with new products and techniques displacing the not-so-old.
- In the course of the 'creative destruction' of firms, industries, systems of production and consumption, solid social relations have turned to air, along with so much else. Traditional community structures have been placed under increasing pressure by occupational mobility (eg children taking jobs very different from their parents), geographical mobility (eg children moving to places, and types of places, very different from their parents), urban development programmes fracturing patterns of interaction, and related trends.
- New media landscapes are being forged, using new technologies such as digital TV, the internet and World Wide Web. These have challenged traditional media like printed newspapers and cinema films – but while in some cases the older media have been displaced, in other cases they have developed new features which allow them to remain competitive. The growth of a consumer society has meant increasing expenditure on media activities, the associated rise of media industries and elites, and the interpenetration of entertainment, advertising and other roles of media (including news and information functions). Electronic media, with their diversity of messages, have become the wallpaper of industrial societies. The proliferation of media with new digital technologies, together with the concentration of major print and broadcast channels in relatively few hands, has been associated with paradoxical trends. On the one hand is the development of immensely sophisticated sources of specialized information and discourse, and an ironic, informed detachment from the transitory output of the mass media; on the other hand is the so-called tabloidization[12] of much media content, with a relentless trivialization of news and perpetually adolescent scatology of entertainment. Though it would be wrong to assume that quality control systems in news media worked well in the past, it does seem that it has become harder to judge the veracity and completeness of coverage – in old as well as new media.
- These developments in the media reflect and reinforce wider social trends that are leading to a subversion of expertise and cynical detachment from much political activity. Expertise in part becomes delegitimated as the populace becomes better informed, as it is apparent that much scientific and technical wisdom is marshalled by large corporate bodies with vested interests, and as the technological disasters of 'risk society' accumulate. Increasing reliance on expertise to inform decisions is to be welcomed, but the partial use of expert knowledge and the claims for scientific inputs as legitimating or leading to political decisions (expressed in a strikingly crude way in the initial years of the 'mad cow' panic in the UK) can readily make doubters and dissenters dubious of all expertise. Suspicions of the self-serving nature of scientific argument have proliferated – for instance, there are plenty of people who believe that the issue of global warming has been cooked up to keep meteorologists and others in lucrative research jobs. It is a small step from here to the wilds of conspiracy theories where AIDS is an

11 This is not to say that Fortean phenomena are a production of postmodernism. The argument is that postmodernism is bringing them to the fore. Historically, they have been brought to the fore by other processes at specific occasions. A particularly interesting case is the co-occurrence of the rise of modern science and the onset of the witchcraft panic in Western Europe, as discussed by Brian Easlea in *Witch-hunting, Magic and the New Philosophy*, Harvester Press, Sussex, 1980. This study shows the way in which the effort to stake out a domain of knowledge on the part of male scientists led to the damning of many purported witches, with the associated elicitation of a large volume of reports of magical operations and their effectiveness.

12 I originally used the offensive term 'dumbing down', whose widespread use is itself highly indicative of the paradox being discussed here. In its political incorrectness (another term laden with self-referential irony), it is an almost elegant demonstration of the very lack of sensibility that its users seek to critique.

experiment in gay-bashing and/or population control, the CIA is implanting mind control probes into unwitting victims, and so on. Attitudes to politicians, fuelled by press coverage of scandal and sleaze, similarly slip down the slope from seeing hidden motives of greed and power, to suspecting hidden machinations of cabals and conspirators.

- The trivialization of political discourse and the growing pains of technocracy also reflect changing social structures. The reconstitution of work and welfare has reduced the role of class-based politics. Social classes still exist, of course, and life chances are highly unequal, even having become more polarized in recent decades. A longstanding left-wing conspiracy theory sees the media's devaluation of political debate as an effort to cover up the persistence of class divisions and class-based politics. But the changes in working life over many years, which have eroded the old bases of working class solidarity (with the 'vanguard' proletariat in mining, metalworking, and so on, being reduced to a fraction of its earlier size), produced differentiated workplaces with complex management structures and career paths, and created hosts of new white-collar and professional occupations, must have profound sociological consequences. Among these consequences are the transformation of traditional politics and the effort to use expertise in technocratic and other ways as an input to policymaking.
- With the fracturing of social class identification, and the fragmentation of traditional communities and their mechanisms for soliciting conformity, the process known as the differentiation of lifestyles grows apace. This is manifest in the proliferation of subcultures, diversified interest groupings, and associated criteria for social differentiation. Many subcultures distinguish themselves, lending meaning and identity to their members, by creating or collecting knowledge of very specific kinds – knowledge about motorcycles or meditation techniques, of live action role games or of local history. Subcultures form around Fortean topics, too, promoting their understanding of ufology or ghostbusting, exploration of altered states of consciousness or ley-hunting. Pools of 'expertise' opposed to the conventional wisdom develop, often seeking to gain adherents and promote their worldviews. They provide rich sources of material for the media – sometimes warning of the dangers of cults, more often picking up on their more sensational ideas.
- Many people experience what is often described as a 'spiritual vacuum' in their lives. While religious leaders are quick to point this out, their explanations usually revolve around the collapse of (their) religious faith in the face of a materialistic culture, or around the deviation of other religious leaders from the true way. But there are other explanations that have cogency and, perhaps, greater scope. For instance, the fracturing of communities and intergenerational relationships may leave people without a sense of collective identity, and the erosion of the legitimacy of traditional leadership undermines these leaders. Some evolutionary psychologists seek to show that religious belief is a product of epistemic tendencies built into the human psyche – the notion is that we have inherited from early primate experience the predisposition to identify with family and tribal groups with inbuilt status hierarchies. Whether or not these specific accounts are accepted, there is well-established evidence that the sense of belonging to a greater whole is conducive to human well-being.
- These trends may be intensified by the growing experience of and discourse about altered states of consciousness (associated with use of some psychedelic drugs, some practices of meditation and yoga, etc), and access to normally repressed dream and fantasy material through psychotherapies. It is far from uncommon for people to emerge from these states convinced that they have had ESP or out-of-the body experiences, or other Fortean-type encounters. Outsiders may regard this as evidence of heightened suggestibility rather than of heightened sensitivity, but there are still people struggling to reconcile these experiences with mundane reality and realism. Some of the subcultures mentioned above seek to address these issues by turning the psychedelic process into a sacrament, some by locating it within a framework of personal growth practices, and some by rejecting it as a snare for the spiritually unsophisticated.
- Globalization of cultural industries, and international migration of significant numbers of people have made it possible for the belief systems and newsworthy events of previously self-contained geographical locales to be widely disseminated. Thus occult religious practices are widely diffused (eg santeria), mysterious messages from diverse cultures nestle side by side (a shop near where I live in the UK was host to a miraculous aubergine bearing the name of Allah recently), news (and experiences) of strange phenomena can quickly be spread (eg chucacabras in Hispanic regions).

This account can be extended and elaborated vastly, such is the complexity of these interleaved developments. But enough has been said, hopefully, to make it clear that while the consequences of these developments are complicated, and liable to result in all sorts of

unpredictable outcomes, a number of likely developments contribute to the Fortean future. This brings us back to the provocations with which this essay began.

The social trends discussed above underpin Fortean foresights, whatever attitude is taken to the underlying nature of the Fortean phenomena. Thus, these trends suggest increasing tolerance of many anomalous phenomena. This tolerance is likely despite the processes of damnation – and despite the accumulation of evidence of mundane causes for some of these phenomena. (As in the divergent cases of crop circles and spontaneous human combustion – with evidence accumulating in favour of their being largely accounted for respectively by hoaxes and by rare but quite normal physical processes).

Some phenomena are likely to be explained away or exposed; but others may be undamned in consequence of science and other key social institutions evolving together. For example, some sorts of miraculous healing may come to be accepted as indicative of previously unsuspected links between soma and psyche; some sorts of UFO may be recognized as anomalous but tangible geophysical phenomena; some wild talents may be tamed without being properly understood. This is not a prediction that these particular cases will happen; but unless there is absolutely no material basis to any of the vast range of Fortean phenomena, shifts in the social relations of science are likely to bring some in from the cold. Some of these shifts may be influenced by the self-organization of some members of more or less well-defined subcultures into groups of researchers, believers, practitioners – or mixtures thereof, as mentioned above.

The likelihood is that competing accounts will proliferate. Many of these fringe groups will be riven by controversy and internal disputes, as is the case for ufology, new age Egyptology, and the like. This is typical of the construction of alternative paradigms – several or even many alternative candidates to be the new dominant paradigm are slogging it out.

In some cases, an account containable within the perspectives of established scientific disciplines may be established, and in others, more strain may be felt. Perhaps the most common shift, however, will be a growing emphasis on the spiritual, mystical and shamanistic elements and opportunities of Fortean phenomena. Or a more secular version of this will be a focus on their scope for personal growth learning experiences, for providing sources of collective identity. The UFO contactee movement was often associated with vague religious tendencies of a sort uncharitably identifiable as Southern Californian (though the long-established Aetherius Society is London-based).[13] The more sinister abductee experience is turned by some of its 'survivors' into a growth experience – see for example the work of Whitley Strieber.[14] Quasi-mystical jargon is a fertile resource for charlatans, while spiritual explanations may be one way for people who have had bizarre experiences to make sense of them. (Paranoia is another.)

These tendencies interact with the social needs for meaning, identity and location in a transpersonal whole of some sort. Furthermore, many Fortean phenomena seem to be associated with quite material circumstances that prompt anomalous psychic functioning - magnetic fields, ultrasonic sounds, etc have been shown capable of triggering experiences resembling nightmares, abductions and ghostly presences. And many seem to be associated with mythic themes, from angels and dragons to wild men and monsters. The opportunities for making sense of the anomalous, creating growth opportunities out of trials and crises, and building communities of support (whether through self-help or through bolstering beliefs) are immense. Even if tangible phenomena prove elusive or fraudulent, the scope for infusing the damned with spiritual meaning is considerable. If our analysis of social trends is accurate, these opportunities will be taken up increasingly.

Cults and charismatic sects are flourishing anyway, and this development will bolster them. Mainstream religious groups, and the more fundamentalist sects, will treat many Fortean phenomena with scepticism or horror – as the devil's work. However, other Fortean phenomena may well find a place in mainstream religions, as is already apparent in the case of miracle healing and visions, and the marginally Fortean speaking in tongues and holy laughter.

Modes of redemption

The next sections of this essay consider some ways in which the damned may come to be redeemed. The analysis is indicative rather than exhaustive.

First, let us take the remarkable case of the UFO. And let us begin with a provocation, again. *Literally millions of people have shared this experience in various forms. Sometimes they feel drugged, sometimes not. They have been unexpectedly seized by*

13 For an interesting account of Aetherian and other cults, see Christopher Evans, *Cults of Unreason*, Straus and Giroux, New York, 1974, available at http://www.drink.com/sci-lib/evans/evans.html .

14 Perhaps most readily assimilated through the effective film *Communion*, which somehow manages to be more moving than his written accounts – perhaps because the storytelling elements are brought to the fore in a movie. Along with *Fire in the Sky*, this film helped shift the view of UFOs away from early monsters and contactee-like benevolent beings, to the abductee scenario; the earlier *Close Encounters of the Third Kind* definitively popularized the 'greys' and abduction, but featured more kindly and playful beings than appear in later accounts.

forces they could not understand, taken out of their comfortable world into a strange environment. Mysterious creatures, often grey with large eyes, have manhandled them, applying strange instruments for unknown purposes. And then they have forgotten all about it. Hardly any of us even claim to recall the experience.

Yes, we have all been born, most of us in industrial countries in hospitals. The baby's vision is more attuned to black and white than to colour (do we see greys?) and focuses on certain aspects of the human face (eyes attract particular attention – and may be all that is visible under hospital masks). The parallels with the alien abduction account are remarkable – of course, this could be synchronicity at work, but it could also be that certain sorts of memory can be activated or reconstructed in certain circumstances.[15] These circumstances may include, for example, hypnotic requests to recall peculiar events; or exposure to environmental circumstances which trigger weird perceptions that demand interpretation, or altered states of consciousness in which everyday assumptions as to the self and external reality are suspended. The abduction phenomenon may have numerous sources – from genuinely anomalous experiences to sleep disorders, from hypnotic suggestion to a search for notoriety.[16] But the abduction narrative may have common roots. (In contrast, the contactee story sounds more like pious wish fulfilment.)

But not all close encounters are contact or abduction tales. A persuasive case that there may be a 'signal in the noise', and that some (probably small) proportion of UFO sightings might represent the phenomenon of 'earth lights', has been made by Devereux and his colleagues.[17] These anomalous light phenomena, apparently involving some form of geoluminescence, have been extensively studied in recent years. They fit the bill for many of the most substantial accounts of UFOs, appearing as luminous balls (and sometimes as metallic shapes in daylight) – few credible UFO sightings appear to be of vehicles (and many of these are probably secret military craft of fairly conventional kinds). They also seem to be associated with some anomalous psychological phenomena and even – though this is bound to be more controversial – with poltergeist-type events.

The physical mechanisms underlying 'earth lights' remain unclear, though commonly these are thought to be plasma balls of some form. (The short-lived excitement about hypothetical 'plasma vortices' as explanations for crop circles gives one pause for thought here. Likewise, it is debatable whether laboratory experiments should be hailed as showing that such things are possible, or taken as demonstrating our failure to understand how large balls can be produced.) Devereux and others have suggestive explanations that lie at the fringes of conventional physics, if not beyond them. Thus there is the problem that at present the situation is one of explaining one Fortean phenomenon (UFOs) in terms of another (earth lights), or possibly simply of relabelling the phenomenon rather than explaining it. But there seems to be more of a chance of getting a hold on earth lights than on tricky aliens. At worst, we simply have two phenomena to deal with, and the earth lights may be more amenable to scientific study. This does not rule out the point made earlier, that such phenomena may well be interpreted by many people in spiritual terms. Just as rainbows and aurora borealis are seen as things of beauty, just as waterfalls and night skies are objects to contemplate, so earth lights may be recognized as wonders of the natural world. Their affinity with myth and magic, let alone the more provocative speculations of some of those chasing the wild lights, may well lead to more fusion of the aesthetic and transpersonal elements of such phenomena.

What this would mean for mainstream science will depend very much upon the circumstances that surround the redemption, if such a redemption does occur. (Let us put aside for the moment what the implications might be in terms of the content and potential application of scientific theories.) If field evidence becomes overwhelming well in advance of progress toward laboratory replication, if it carries with it testimony from respected figures in relevant disciplines, then the situation is potentially more embarrassing than the case in which a new field of electroluminescence or plasma physics or whatever is established. In either case there may

15 Forteans are well aware of the debates about 'recovered memory', the dredging up through therapy or hypnosis of recollections of events as various as satanic abuse and previous lives. They are also aware of the considerable scientific controversy surrounding the process, and the claims made by many leading psychologists that memory is not like a tape recorder but more actively constructed, and that false memories can be readily constructed. (Indeed, it seems more than likely that many commonplace experiences of seeming telepathy and anomalous encounters actually represent the mind mistakenly filling in details to provide a coherent account of things.) The case being made here is not that repressed birth memories are being replayed like a tape recording, but rather that the birth experience – profound, but one experienced by a largely unformed mind, without expectations, conceptualizations, and reference points into which to slot such an experience – may provide a kind of template for other bizarre experiences.

16 An illuminating account of the abduction phenomenon and abductee movement is Jim Schnable's *Dark White*, Penguin, Harmondsworth, 1995. For a coruscating critique of both the abductee perspective (Whitley Strieber) and the postmodern celebration of belief in these narratives as representing a liberating, transgressive refusal of dominant ideologies (Jodi Dean), see Frederick Crews, 'The mindsnatchers' in the *New York Review of Books*, Vol 45, No 11, 15 June 25 1998, pp14–19.

17 See the informative and enjoyable Paul Devereux and Peter Brooksmith, *UFOs and Ufology: the First Fifty Years*, Blandford, London, 1997. (Do not be put off by its coffee-table format and lurid cover: this is both a serious and entertaining study, and should be of interest to many people who would not consider themselves Forteans, let alone 'ufologists'.) For a website devoted to the most extensively investigated 'earth light' sites, see http://www.hiof.no/crulp/prosjektor/hessdalen.

have to be recognition that mainstream dismissal of a class of phenomenon and body of evidence was misguided, and rearguard action will need to be taken to justify this. Justification will be a lot easier in the UFO field than in many others, such are the hoaxers and charlatans that infest it. But the evidence that experts can be unduly dismissive of lay accounts and too ready to damn unorthodox observations may well have spill over effects in terms of willingness to suspend disbelief in the case of other anomalous phenomena.

Fortean technology?

The discussion has centred on damned data, and their implications for scientific understanding. The close connection between Fortean analyses of the damnation of data, and more conventional studies of the operation of scientific paradigms has been noted. Under the right circumstances, some of the mainstream paradigms may be challenged. These circumstances are likely to require more than the mere quantitative accumulation of data. They may require:

- Substantial qualitative change which is widely recognized in the data (eg material evidence of new kinds, testimony from witnesses of different kinds).
- Developments within sciences themselves which show that phenomena resembling the anomalous can be generated in replicable ways (for example, creation of fireballs in laboratories or apparitions in broad daylight).
- Changes in the scientific community rendering dissident voices more audible (this has happened a couple of times in the case of parapsychology, most recently as the 1960s generation, with its interest in altered states of consciousness, attained academic seniority).

Some change in mainstream scientific theories is anticipated in the Fortean future. How much is an open question, as is the matter of whether there might be associated changes in scientific method as well. The discussion of paradigms points the way to another interesting question, however, for the term has been applied to technological paradigms as well. Are there Fortean issues here?

The analysis of technological paradigms has shown how particular styles of technological development are very path-dependent: thus most of us use IBM-style PCs rather than Macintosh-style ones, VHS rather than Betamax videorecorders, and so on, not because these are inherently superior systems (far from it) but because of a history of complex selection processes setting up vicious and virtuous circles. These examples are actually rather closer to the notion of design paradigms within particular technologies than to the grander technological paradigms described in innovation theory, where one or other radical core technology becomes, through social processes, the heart of a new technological regime – the microprocessor displacing the transistor and vacuum tube (and all sorts of other device), for example. Such a paradigm shift requires that the new technology is perceived as having overwhelming advantages by a broad range of users and intermediate suppliers, and that it is generally found to be socially acceptable.

The alternative technology (AT) movement, however, has added to this the argument that in many cases the key sociotechnical constituencies that determine technological choices do so out of a narrow set of interests and concerns. Thus, what is perceived as beneficial by them might not be seen as such were wider informed participation in technology development and choice enabled. Their classic example is the fixation of most Western societies (and others) from the 1950s until the 1980s/1990s (or even later) on nuclear power, at the expense of paying attention to renewables. Thus, a long-established strategy from the AT movement has been efforts to vindicate non-conventional energy technologies such as windpower. These technologies were often disregarded by the energy establishment, on the grounds that they were inherently incapable of meeting mass energy demands. In at least one case in the UK, civil servants responsible for preparing estimates of the costs and benefits of different energy supply options were discovered to have systematically underestimated the potential of one non-conventional source (wave power) to such an extent that deliberate malice seems to be the only explanation. But in any case, for many years the debate remained largely a closed one, and it is only in the 1990s that the efforts of the AT movement are bearing fruit. In the complex circumstances created by liberalization of energy markets, demands to reduce CO_2 emissions, and continuing problems with nuclear power, renewables have been recognized as viable alternatives to CO_2-generating fossil fuels. Many renewables are cheaper and more socially acceptable than nuclear power, and plans are now afoot to shift a sizeable share of the electricity supply in many European countries to these sources.

It should be noted that these energy alternatives are now being accommodated within the established energy delivery paradigm of Western countries (national electricity grids), rather than being used for small-scale self-sufficiency as promoted by many members of the AT movement. In terms of the framework developed by Miles and Irvine[18] for thinking

18 Ian Miles and John Irvine, 'Changing ways of life in industrial countries', *Futures*, Vol 14, No 1, 1982, pp11–23.

about efforts to change established ways of life, these approaches are moving from the counter-culture model to the reformist one – from creating enclaves of changed individuals to incrementally reshaping social structures. Environmental concerns have moved on to new vistas for counter culture, social responsibility and radical change. There are probably lessons in this for the development of other alternative technologies - and indeed for the development of unconventional bodies of scientific knowledge. One lesson in terms of alternative technologies is that, for these to be recognized as not only technically feasible but socially and economically viable, they may themselves have to be accommodated to fit in with major technological systems that are already in place. Renewables fit within centralized distribution systems, rather than forming the basis for a new, decentralized infrastructure.

Could there, then, be other alternative technologies in the wings, being kept off-stage by the prima donnas and stage directors of established technological paradigms? There is good reason to think that the 'swarming' of interest around new core technologies does lead to underattention to other technologies, and indeed to non-technological solutions to the problems which innovations are supposed to be tackling. Funding and talent, and even foresight programmes, are attracted by exciting new radical technologies, just as the stock market has its fashions in high-tech companies. But this simply means that many individual alternatives are excluded, not that there are whole alternative paradigms which remain damned.

Perhaps there are such paradigms. Analogue computing might be one, marginalized with the focus on digital applications of microprocessor technology. Lighter-than-air craft might be another: surely dirigibles can now offer opportunities for transporting materials without running the risk of new Hindenbergs?[19] Indeed, in many areas of technology it is easy to locate maverick voices who propound alternative designs and alternative system fundamentals.

But a step beyond this would be technologies founded upon Fortean phenomena – the domestication of the damned! The term 'psionics' has long been in use to capture the aspirations of using parapsychological phenomena like telepathy and telekinesis in predictable ways. Despite considerable interest and years of effort in the field from consumer electronics companies (Sony in particular) and the military (eg the US remote viewing programme), there has been no sign of a breakthrough here. As with academic parapsychology, those involved have often been convinced of the reality of the phenomena, and amassed anecdotal and statistical evidence of considerable volume. Many of these investigators, too have become sadly aware of the elusiveness of psi effects. It is as if they are slippery as well as damned: too slippery to be relied on in military intelligence or videogames.

Perhaps part of our ultimate understanding of these particular phenomena will involve an explanation of this slipperiness. It may even be possible to exploit this. After all, the slippery nature of quantum effects (Is it a wave? Is it a particle? Just where is it?) are being exploited in commercial technologies like Josephson junctions and potentially significant techniques like the 'teleportation' of beams of light.

Psionics may have enlisted thousands or even tens of thousands of dedicated would-be practitioners. Alternative medicine is followed by several orders of magnitude more of clients in industrial societies. Could some of the alternative techniques represented here first, achieve substantial effects that work in some relatively consistent way, and, second, come to be accepted as the basis for new medical approaches deemed legitimate by the mainstream?

Alternative medicine offers ways of approaching the human condition that are often described by their proponents as more holistic than those taken by mainstream Western medicine. This is demonstrable in the case of some practitioners and disciplines, for whom the norm is a much more intensive consultation with the client, featuring a much more extensive range of personal conditions and circumstances than in orthodox medical practice. It may be that the very processes of discussion of one's life circumstances, being paid attention to, and having an opportunity for self-reflection about possible connections between compartmentalized features of one's life, can themselves have therapeutic virtue.

The interpretative frameworks offered by various alternative therapies are diverse – and again frequently mutually inconsistent. But they do frequently share a belief in vitalistic energies. To mainstream medical practitioners, this is a throwback to prescientific days. In the conventional wisdom, which admittedly has a good deal of force, a key achievement of modern biosciences is seen as being their explication of organic processes in terms of naturalistic chemistry and physics. This achievement demonstrated the continuity of organic and inorganic processes. Whether this is used to bolster a reductionistic model of science, or seen in more holistic fashion in terms of emergent properties appearing in increasingly complex systems, it is one of the great acts of decentring that has been achieved in the rise of modern science.[20] Notions of life energies do have a resonance for many people, quite possibly

19 One vision, ironically, involves the transport of hydrogen. Offshore wind farms convert wind power to useful energy in the form of hydrogen fuel cells, which are carried to the mainland by dirigibles.

because they provide a ready metaphor for the various mental and physical states experienced in health and disease. Beyond such metaphors, do alternative therapies have anything to offer other than impressive empirical knowledge (over the millennia various herbs have been found to be remarkably effective treatments for various diseases) or mumbo jumbo (my own favourite is the use of crystals as psychic vacuum cleaners to suck away spiritual mucus!)?

It is almost certain that we stand on the verge of breakthroughs in the applied life sciences that have the capacity to dramatically change our medical practice and capabilities. Gene therapy, organ cloning, nerve cell repairing and many other techniques are on the horizon. Slowing and even reversing ageing may soon join them. In this era of fundamental discovery about the inner workings of the body, can alternative therapies hope to survive? Surely it would be foolish to speculate about their flourishing as alternative paradigms?

We'll see. At the present moment, there is an upsurge of interest in many of these alternatives, and some of them seem to have more than just wishful thinking underpinning their growth. In particular, homeopathy has been advanced by its proponents as medicine for the twenty-first century.[21] Hyperbole is to be expected from practitioners of an alternative paradigm, but there are factors here which may substantiate the rhetoric.

First, homeopathy has been growing in popularity for many years, attracting numerous clients and an increasing pool of professional practitioners (as well as users of self-help books). Remarkably, homeopathic treatments are not only claimed to be effective for adults and children for whom placebo effects might be anticipated, but also for babies and animals. Solid clinical evidence for the techniques is hard to come by, and has occasioned much debate when proof of efficacy has been claimed. (A notable case of scientists mobilizing to confront a heresy and expose it as flawed was the investigation of Beneviste's claims, published in *Nature* in 1988, to have found impressive effects from high dilutions of a biochemical molecule. A high-powered investigative team concluded that all that was involved was self-delusion and statistical error – though not all agree.[22]) Many homeopaths would see standard clinical trials as flawed, since they depend upon standard prescriptions and dosages, whereas homeopathic practice involves much more sensitivity to the specificities of individual clients. Nevertheless, many homeopathic books do provide indications of standard treatments for common problems, and the clinical evidence for their efficacy is elusive – while anecdotal support is widespread.

Second, one factor in the growth of homeopathy is surely the way in which this therapy allows for 'holistic' study of individual cases. As suggested earlier, this may allow clients to acquire greater insights into their own ways of life and how their behaviour, perceptions, and health may be linked. They will have opportunities to unburden themselves and experience levels of attention that are missing in much conventional medicine. Additionally, they will not need to overcome the barriers of stigma and prejudice that might accompany explicit psychotherapy and counselling. Other 'holistic' treatments also offer many of these features, but homeopathy does so in a well-organized way, and is seen as effective against a wide range of health problems (unlike, say, osteopathy). It is also, in some countries and circumstances, at least partly legitimated by ties to the conventional medical establishment – some National Health Service doctors in the UK practice homeopathy as part of their calling. (In other countries herbalism, acupuncture and other approaches may be similarly placed.)

Third, homeopathy offers a direct challenge, and alternative treatments, to the mainstream techniques of vaccination against a range of infectious diseases. There appears to be growing resistance to the use of these techniques, fuelled by several factors, including:

- perceptions of the decreased threat posed by some diseases (partly in consequence of vaccination having reduced their incidence, partly in consequence of the threats posed by the diseases being less severe for the well-nourished citizens of affluent societies);
- evidence of various health threats that are posed by certain vaccines and combinations of vaccines – the trade-offs of risks associated with positive choices to accept vaccination as against those associated with negative choices to leave things as they are, is typical of the dilemmas of risk society;

20 In the decentring offered in biosciences, our sort of life no longer appears to represent a radical, privileged break from the other material of the universe; and in the evolutionary paradigm, humanity no longer represents a discontinuous break from the animal world. These acts of decentring follow Copernican astronomy's dethroning of the earth from its location at the centre of the universe. In the social and psychological sciences, Marx's displacement of human needs from the centre of the (capitalist) economy; psychoanalysis' displacement of the conscious mind and ego from the core of mental life; and, speculatively, developments in artificial intelligence and computer awareness, or contact with alien intelligences, demonstrating that our kind of consciousness and intellect is by no means the only form that these capabilities can take. These decentrings are important elements of modernity, echoed in the arts and literature by similar displacements of the role of the (omniscient) author, etc. The cognitive challenges they pose to premodern belief systems contribute to the new age trajectories of postmodernism.

21 Dana Ullman, *Discovering Homeopathy: Medicine for the 21st Century*, North Atlantic Books, Berkeley, 1991.

22 For a highly critical account of the treatment of the researchers involved by the scientific establishment, see Michel Schiff's *The Memory of Water*, Thorsons, London, 1995, who also examines various other cases and strategies of scientific damnation.

- suspicions in some quarters that the unusual assaults on the immune system constituted by vaccination may be related to the mysterious increases in auto-immune and immune deficiency diseases; and
- further suspicions that the enthusiasm for at least some vaccines is fuelled by a medical-industrial complex that is more interested in profits (or in the case of doctors, performance indicators) than in efficacy (eg a meningitis vaccine targeted at children of an age range inappropriate for the variety of the disease in question). These trends might be reversed – for example, the development of a successful AIDS vaccine, probably only a few years away, may have a halo effect on vaccination in general. Or they may be intensified, for example by accumulating evidence of vaccines' harmful side-effects. In the event of the latter, homeopathy, with its alternative approaches and established critique of vaccination, is liable to benefit (unless new biotechnologies are already in hand).[23]

Perhaps the biggest challenge facing homeopathy is its lack of a conventional causal account of how it operates (if it does). The Law of Similarities may be a handy empirical guide, but why should infinitesimal potencies yield their effects? At present, notions of mysterious energy traces, or of flows of information (which also imply energetic changes) from remedy to organism are closer to gestures towards understanding, than to theories.[24] Only the bare bones of an alternative scientific paradigm are visible. But it can make sense to see homeopathy as representing an alternative technological paradigm. Technological paradigms need not depend upon an elaborated scientific base, as long as there is sufficient empirical support for their effectiveness perceived by a community of practitioners. In the case of homeopathy, such a community shares lines of investigation (actively 'proving' remedies, for example), discusses possibly fruitful lines of practice and explanation ('Contonian physics', etc), codifies and exchanges clinical experience in print and online media. But the deficit in theory means that the technological challenge is in part muted, because there is little common ground to debate, and few elements for 'translation' across paradigms available. Given the difficulty in seeing what form a coherent theoretical account could take – making it possible to integrate homeopathic understanding with other contemporary worldviews – the implications for science, should homeopathy become socially validated as a form of medicine, are almost completely unpredictable.

However, it is more than likely that a future rise of homeopathy would be facilitated by crises in various aspects of mainstream science and, especially, medicine, as well the topics mentioned earlier. In particular, failures of the new biotechnology to live up to its widely touted and dramatic promises, or the discovery that there are far more pervasive problems of risk and social resistance than anticipated, could boost alternative therapies. Examples of such problems might be the transfer of animal diseases to humans through xenotransplantation, highly unpleasant side-effects from anti-ageing treatment, even the 'Fortean' transmigration of personality characteristics from human transplants or gene therapies. Ethical and other concerns may grow around genetic screening and the use of genetic information, and insensitive introduction of new techniques may be associated with estrangement of sections of the public from less personal and more medicalized treatments. Other factors may also lend support to non-mainstream styles of non-reductionist science[25] – but this brings us to the discussion of broader social trends taken up earlier.

The case of homeopathy has been taken up here not to endorse this specific approach. In Europe, at least, it does seem to represent a possible contender to mainstream medical technologies.[26] Conventional medicine's dramatic breakthroughs in vaccines, antibiotics and the like pulled the rug from under homeopathy in the twentieth century, and perhaps biotechnologies will do so in the twenty-first. But there are other contenders around, such as acupuncture and reflexology. Watch this space – whatever happens, the debate between mainstream and alternative approaches to health will continue to be a fascinating indicator of social trends and strains. And, as in the case of renewable energy technologies discussed earlier, the question of what sort of mutual accommodation is made between the established systems and the contending ones is very open, and may surprise the proponents of each approach. Perhaps alternative medical paradigms will find a place as complementary therapies, rather than as alternatives per se; or perhaps it is mainstream medicine that will become complementary, only used for certain types of emergency!

23 After I prepared this discussion I received a copy of a fascinating and very relevant study by the Institute for Alternative Futures, *The Future of Complementary and Alternative Approaches in US Health Care*, Institute for Alternative Futures, Alexandra, VA, 1998. See http://www.alfutures.com. Working from perspectives that differ in some respects from those developed here, this study also sees potential for growth of homeopathy and also chiropractic and oriental medicine in the USA, but goes much further in considering how they might be articulated together with conventional medicine.

24 The problem is even worse at those extremes of homeopathy where potencies of sunlight are employed, where homeopathy and astrology are synthesized, and so on.

25 A good argument could be made that there are 'holistic' interpretations available within mainstream science.

26 It would not be the first time that homeopathy has seemed to mount such a challenge. See for example Harris L. Coulter, *Divided Legacy: the Conflict Between Homoeopathy and the American Medical Association*, North Atlantic Books, Berkeley, 1982.

Twenty-first century Fort?

The twentieth century has seen triumphs of science and technology, and massive upsurges of irrationalism (the Nazis in particular leaving millions dead in their wake). With many world regions experiencing hardships, stresses and grievances like those that fuelled (and still do fuel) European frenzies of the twentieth century, the world looks like being in for a rough ride in the coming century. The continuing advance of modern science and technology will remain complexly intertwined with both rationalism and irrationalism.

From the discussion above, it is possible to envisage a wide variety of possible alternative futures that might result from the interplay of these factors. As so often, a helpful approach to scenario analysis can be to construct a template for different paths of development in terms of key parameters of change.

A basic approach here would be to consider two levels of challenge raised by the Fortean field, and two types of response from the mainstream. We can imagine the impact of anomalous phenomena and technologies to be minimal or considerable, and we can imagine the relations between the proponents of the damned and the mainstream to be more or less conflictual. This gives us two parameters that can be arranged to give four quadrants, as in Figure 1.

The four quadrants can be identified with major scenarios – though of course, there are considerable variations possible in terms of the precise location of futures in this two-dimensional space. (It also should be noted that the dimensions considerably simplify the discussion above, eg insofar as scientific theories and scientific practice may or may not change together.) The future that we will eventually live with will in all likelihood represent an amalgam of the four quadrants.

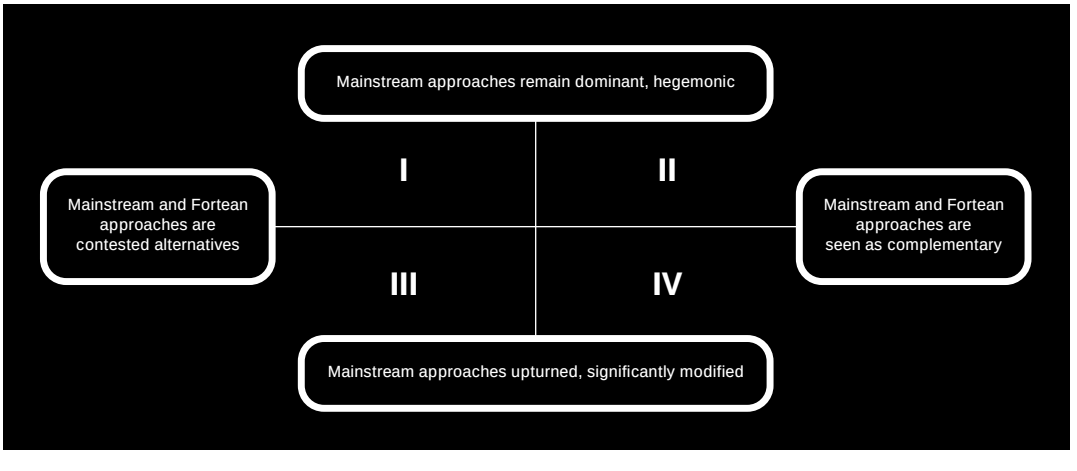
Quadrant I effectively represents a continuation of the current situation: on the whole mainstream science is dismissive of a wide range of phenomena and approaches which retain strong adherence from significant groups of the population. This is likely to be the case for many of the Fortean phenomena discussed above, in fact.

Quadrant II represents the evolution of significant sections of the Fortean field so that they become accommodated into the mainstream. The phenomena or techniques that were previously dismissed become recognized as comprehensible and at least partly controllable within an incremental modification of established theories and approaches. This would seem to be probable for many alternative approaches in medicine, for example, and might be the fate of the 'earth lights' phenomenon.

Quadrant III is one in which there is a breakdown of consensus, a high level of conflict between alternative belief systems and paradigms. In such a future, we might expect to see powerful actors rejecting significant elements of modern science and technology – but so effective are these systems that it is hard to imagine that even the most fanatical counterculture or fundamentalist movement would cast them aside in their entirety. What might be anticipated is that specific approaches are dismissed, as creationists would wish to see happen to evolutionary accounts of history.

Finally, Quadrant IV is one in which significant fields of science and technology have had to rethink their approaches and procedures as a result of challenges. These challenges might come from outside (eg unarguable demonstrations of the reality of earth lights or the efficacy of homeopathy), or from developments within the

Figure 1 Fortean futures



sciences which both restructure the core understanding of fields of study and create space within which the anomalous phenomena can be recognized as significant ones.

The future, as suggested, is likely to be an amalgam of these quadrants, with rather different scenarios applying to specific areas of the Fortean field. It is as likely to be shaped as much by ongoing developments in society, economy and culture as by the efforts of Forteans, true believers, and true sceptics. But, as this essay has sought to demonstrate, paying attention to what the Forteans have to say is worthwhile. They are making a strong case for the continuing impact of Fortean developments on the future. Their arguments prove valuable in understanding the nature of the alternative futures that this implies, and in suggesting what sort of amalgams of them we can expect.